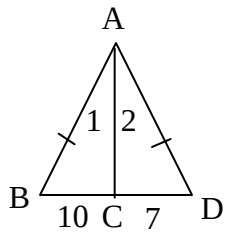
Worksheet 5.6 Hinge Theorem Chapter 5

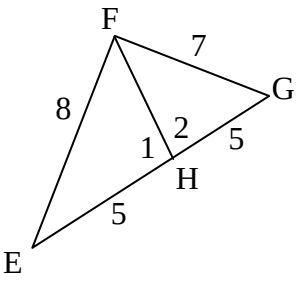
Name _____

Refer to each figure given write an inequality relating the given pair of angle or segment measures.

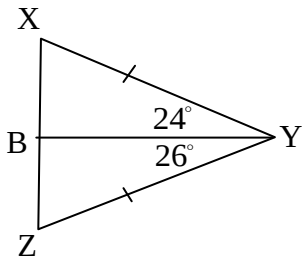
1) $m\angle 1, m\angle 2$



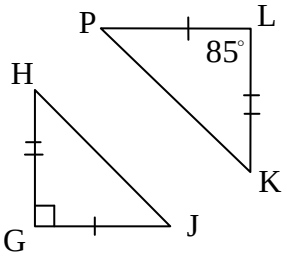
2) $m\angle 1, m\angle 2$



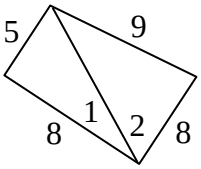
3) $\overline{XB}, \overline{ZB}$



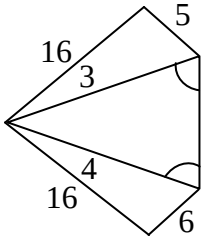
4) $\overline{HJ}, \overline{KP}$



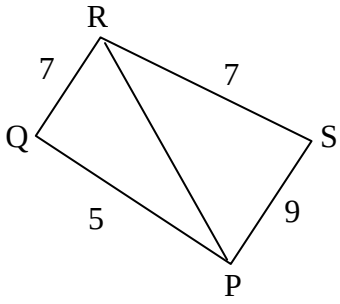
5) $m\angle 1, m\angle 2$



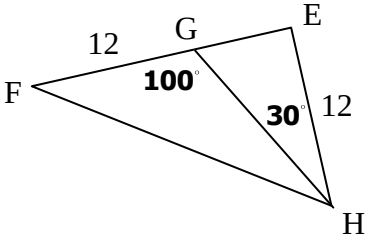
6) $m\angle 3, m\angle 4$



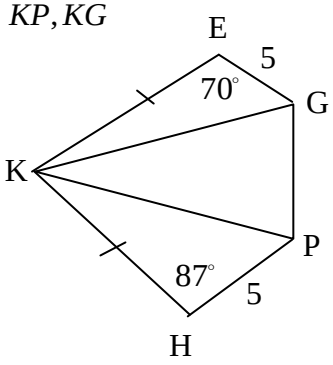
7) $m\angle PRQ, m\angle PRS$



8) $\overline{FH}, \overline{GE}$

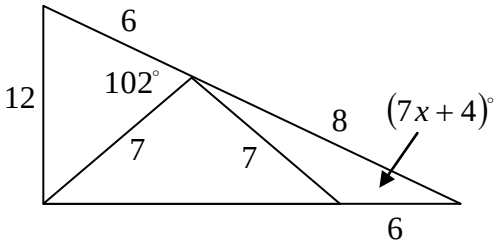


9) $\overline{KP}, \overline{KG}$

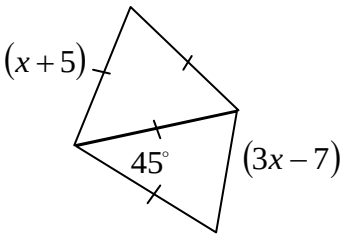


Write an inequality or pair of inequalities to describe the possible values of x. Then solve the inequality to find the values of x.

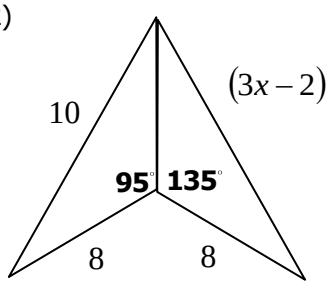
10)



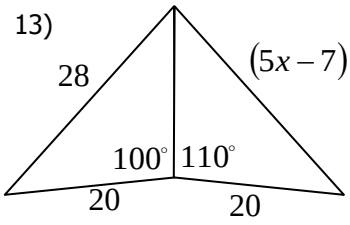
11)



12)



13)



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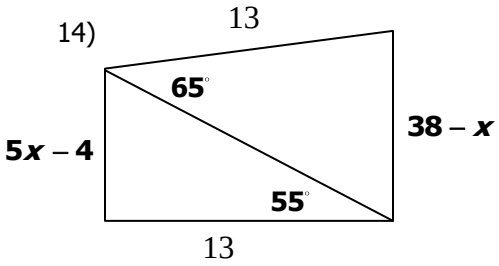
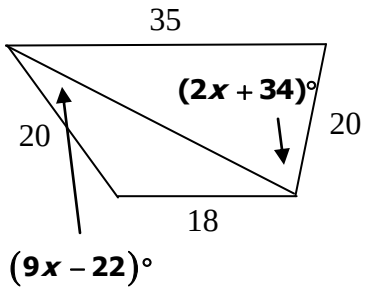
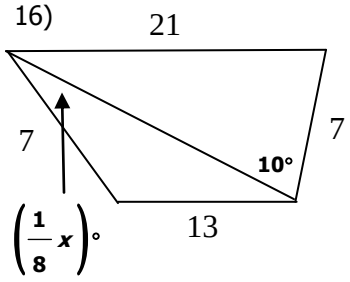


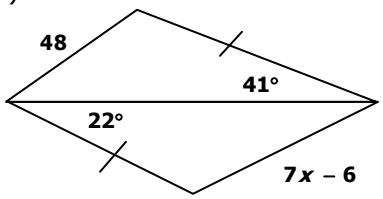
15)



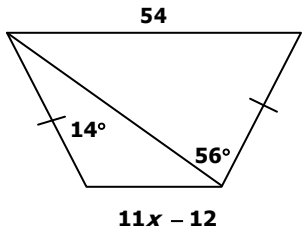
16)



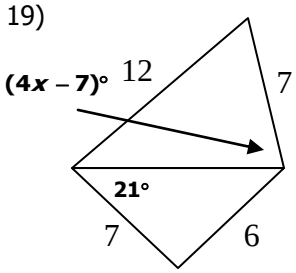
17)



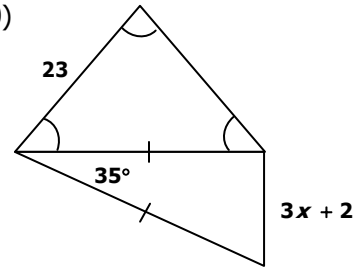
18)



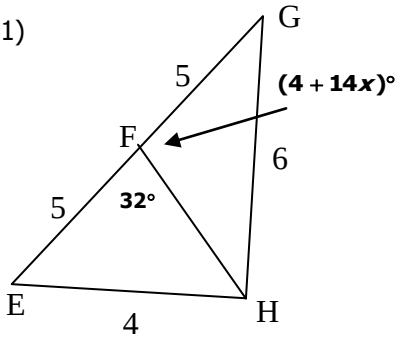
19)



20)



21)



Factor the following equations.

22) $x^2 - 2x - 15$

23) $x^2 - 23x + 60$

24) $x^2 + 10x + 9$

25) $4x^2 + 8x - 5$

26) $4x^2 + 7x + 3$

27) $5x^2 - 8x - 4$